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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,226	11/27/2001	Patrick P. Hicks	2070.004500/P6761	9652

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EXAMINER

ABRAMS, NEIL

ART UNIT	PAPER NUMBER
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2839

DATE MAILED: 10/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995226

Applicant(s)

Examiner

Abrams

Group Art Unit

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 8-30-02 (C/m 8-27)
- ☒ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-6, 8-12, 18-22, 26-29 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-6, 8-12, 18-22, 26-29 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____.
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

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Claims 26-29 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26, "the expander board" has no antecedent basis. Claim 20, "expanding" seems incorrect; the complaint contacts would appear to "contract" not expand when inserted in holes.

Claims 1-6, 8, 9, 10-12, 18-22 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heberling or Amberg or Leman, anyone in view of Broeksteeg, Amberg, Lee, Provencher, Fox, HDM, Dent, Weber and Masuda.

For claim 1, it would have been obvious to provide Heberling, Amberg or Leman (see figs. 2, 6) circuit boards with supports and wafer affixed contacts in view of Lee (support 48, wafers 50a, 50b, 50c, 50d or support 20, wafers 22a, 22b), Provencher, support 110, wafers 114 and Broeksteeg, supports 102, 102' wafers 60. These would be placed at mating edges to provide increased numbers of connections. For Leman, fig 6, use of edge connectors also further taught by Amberg. Also obvious to use power modules and guide modules in view of HDM and Fox at J.

References in claims to power voltage being higher than signal voltage or to specific values relates to obvious expedient, not shown to produce any specified objective as discussed in specification on page 14, lines 5-9. In addition, even without other teachings it is standard to apply higher power voltages than signal voltages. In addition, while not essential to the rejection, HDM, page 4 teaches 12A (amp) power and 1A (amp) signal current; Weber discloses high

*and
Weber*

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current power contacts modules at C and D that are much larger than signal contacts at B and Masuda and Dent disclose use of high voltage power contacts along with lower voltage signal contacts. Obvious to apply any of these Weber, Masuda and Dent teachings to the main reference assemblies. Use of Dent +12V and +5V levels would also meet claim 1 feature at issue. Weber power and guide modules, see fig. 1A, are also noted.

For claim 20, obvious to use Broeksteeg type complaint pins 76.

Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amberg in view of Fox, Broeksteeg, HDL, Weber, Dent and Masuda.

Obvious to form Amberg boards with and guide modules in view of Fox at J and HDM and to provide signal voltage at one voltage level and power at another and higher voltage level. Use of such voltage features would be an obvious variant for reasons discussed above. Also obvious to use Broeksteeg type complaint contacts.

Applicant's arguments filed with the amendment have been fully considered but they are not persuasive. The voltage level recitation is discussed in specification only as a minor feature with no mention of any special significance. Further it is well known that power requires higher voltages than do signals. In addition, HDL, Masuda, Dent and Weber are added, to show ^{different} teachings of ~~voltage levels~~, See Masuda, fig. 3, power terminals 2, 3 and signal terminals 4 and column 5, lines 20-25 and Dent, see abstract. Applicant is also asked if 48V power and 2-4V signal levels are known standards in systems of type at issue in this case ~~and/or~~ if ~~high~~ power, low signal voltage levels are standard.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).


Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to N. Abrams at telephone number (703) 308-1729.

N. Abrams/mm

10/15/02


NEIL ABRAMS
EXAMINER
ART UNIT 322